



Workshop New frontiers in transportation modelling

(Friday 29 January 2010)

Speakers:

A/Professor Kouros Mohammadin (University of Illinois at Chicago, USA)

Professor S.C. Wong (University of Hong Kong, HK)

A/Professor Stephen Greaves (The University of Sydney, AUS)

Dr. Majid Sarvi (Monash University, AUS)

Preliminary outline

Registration and morning tea	9:00 AM- 9:30 AM
Session 1	9:30 AM – 11:30 AM
A framework for modelling	
Introduction to urban transportation planning 1. Process of urban transportation planning a. Travel demand modelling 2. Network modelling	K. Mohammadian M. Sarvi
Session 2	11:30 AM – 1:00 PM
Emerging methods in urban transportation planning	
1. Tour-based models 2. Activity-based models 3. Advanced choice models 4. New sources of data	K. Mohammadian
Lunch	1:00PM - 2:00 PM
Session 3	2:00PM - 3:30 PM
New topics in data collection	
1. Data needs of current and emerging models 2. Evolution of household travel surveys 3. Current innovations a. Mobile technology surveys (GPS, mobile phones) b. Web-based prompted recall surveys c. Panel surveys d. Multi-day, continuous measurement 4. Data fusion and simulation	S. Greaves
Afternoon tea break	3:30PM – 4:00 PM
Session 4	4:00PM – 5:30 PM
Land use modelling	
1. Reliability-based land use and transportation modelling issues 2. Housing allocation optimization in urban cities	S.C. Wong

New Frontiers in Transportation Modelling

This workshop will provide an overview on transportation modelling. It further introduces the state of the art developments in the area of transportation and land use modelling as well as travel and household survey technologies.

Workshop Objective

The workshop is aimed at providing:

- An overview on transportation planning, travel demand and network modelling
- A rich overview of the latest research in emerging methods of urban transportation modelling such as tour and activity based modelling
- A basic understanding of data needs of current and emerging transport models
- An overview of the latest research in land use modelling

Who Should Attend?

This workshop is suitable for transport industry professionals including engineers, planners, researchers, and state and regional government planning agencies. Those interested in transportation planning and modelling, strategic modelling, land use modelling, and application of advanced technologies to travel surveys will benefit from the specialist topic discussions during this workshop.

Registration and General Information

Registration: Participants are encouraged to register in advance by using the attached registration form (places are **limited to only 20** for this workshop). Complete and return the form (or a copy) by mail, or email to:

Ms Irene Sgouras
Department of Civil Engineering
P.O. Box 60, Monash University, Vic3800
Tel: 03 99054971
Email: irene.sgouras@eng.monash.edu.au

Fee

The fee is AUD\$550 (GST inclusive). Registration includes: attendance, workshop materials, lunches, morning tea, and afternoon tea.

Venue

Monash University, Clayton Campus, Department of Civil Engineering, Room 110, Building 60.

Technical Contact Details

Technical information regarding the workshop can be obtained from Dr. Majid Sarvi at:

Dr Majid Sarvi
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Department of Civil Engineering (Building 60)
Clayton Campus Monash University Victoria 3800 Australia
Telephone: +61 (3) 9905 9696
Email: majid.sarvi@eng.monash.edu.au



About the Speakers

Korous Mohammadian is an Associate Professor of Transportation Systems in the Department of Civil and Materials Engineering at the University of Illinois at Chicago (UIC). His research over the past several years has covered various areas of transportation planning including travel behavior analysis, modelling of activity and travel patterns, travel survey, and development of state-of-the-art travel demand models for implementation in practice. He has published extensively in the field and his work has appeared in several international journals. He is the co-editor-in-Chief of the Journal of Transportation Letters and has served as guest editor of the Journal of Transportation. He has served in several committees of the US National Academy of Science -Transportation Research Board (TRB) including Transportation Demand Forecasting, Traveler Behavior and Values, Telecommunications and Travel Behavior, Travel Survey Methods, Statistical Methodology in Transportation Research, and the Taskforce on Moving activity-based approach to practice. He has received the 2008 Fred Burggraf and 2007 Charley Wootan awards from the Transportation Research Board recognizing his contributions and excellence in transportation research.

S.C. Wong is Professor and Deputy Head of the Department of Civil Engineering, and Director of the Institute of Transport Studies of the University of Hong Kong. He received his B.Sc.(Eng.) and M.Phil. degrees from the University of Hong Kong, and Ph.D. degree in Transport Studies from University College London. His research interests include the optimization of traffic signal settings, continuum modelling for traffic equilibrium problems, traffic flow theory, traffic management and control, transportation planning and network modelling, and road safety. Professor Wong has published over 150 papers in refereed journals, and is currently Editor-in-Chief of *Transportmetrica*, and the *International Journal of Sustainable Transportation*; Associate Editor of *IEEE Transactions on Intelligent Transportation Systems*, and *Journal of Advanced Transportation*; and he is a member of the Editorial Board several journals, such as *Transportation Research Part B*, *Transport Reviews*, *Journal of Intelligent Transportation Systems*, *ASCE Journal of Urban Planning and Development*. He is also member of the AHB45 Committee on Traffic Flow Theory and Characteristics of the Transportation Research Board, and International Scientific Committee of the Eastern Asian Society for Transportation Studies. Locally, Professor Wong was appointed by the Chief Executive of the Hong Kong SAR (What is SAR) Government as a member of the Tuen Mun Road Traffic Incident Independent Expert Panel in 2003. He is currently member of the Transport Advisory Committee, chairing its Transport Complaints Unit Sub-committee, and member of the Road Safety Council, Road Safety Research Committee, and Harbour-front Enhancement Committee of the Hong Kong SAR Government; President of the Chartered Institute of Logistics and Transport in Hong Kong; and Vice-president of the Hong Kong Society for Transportation Studies.



Stephen Greaves is an Associate Professor in Transport Management, having joined ITLS-Sydney in 2004. He has extensive teaching experience in a wide variety of transportation-related courses at both the undergraduate and postgraduate levels as well as industry-based short courses. Currently, he coordinates TPTM6470 [Sustainable Transport & Logistics Systems] and TPTM6180 [Geographic Information Systems] in the postgraduate MTM program and is program director of the Advanced Certificate in Traffic and Transport Management (ACTTM). Stephen's current research interests are focused on the use of new technologies to enhance the collection of travel survey data, environmental impacts of freight transport, and exploring behavioural responses to different road-user charging mechanisms. He currently holds two ARC grants, advises four PhD students and continues to publish extensively in a wide-range of mediums. Stephen also provides transport consulting services to government and industry and regularly provides media commentary on contemporary transport policy issues in Sydney.

Majid Sarvi is a Senior Lecturer of Civil Engineering Department at Monash University. He is the deputy head of the transport group and the main committee member of the Victorian transport committee of Engineering Australia. He has received 3 degrees in civil engineering: a BEng (with honors), a MEng and a Ph.D. from Tokyo University in 2001. He has served on several international committees, the A1C05 Network Modelling Committee, AHB45(1) sub-committee on transport simulation and Characteristics, AND10 Vehicle User Characteristics of the Transportation Research Board. He has over 10 years of professional, academic and research experience in the areas of transport modelling, public transport modelling and operation, transit network and transport network optimization, traffic flow theory, traffic operations, modelling of complex networks for intelligent transportation systems, traffic micro and nano simulations, and pedestrian and crowd modelling. He is the author/co-author of over 90 refereed publications in journals, various conference and symposia proceedings. He also serves as a consultant to several companies and government agencies in the areas of transportation network modelling and simulation, transit modelling, intelligent transportation systems, and strategic systems planning.